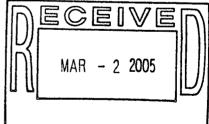
Rocky Flats Environmental Technology Site

Building 776/777 2nd Floor Area Final Survey Report

Survey Units: 776036

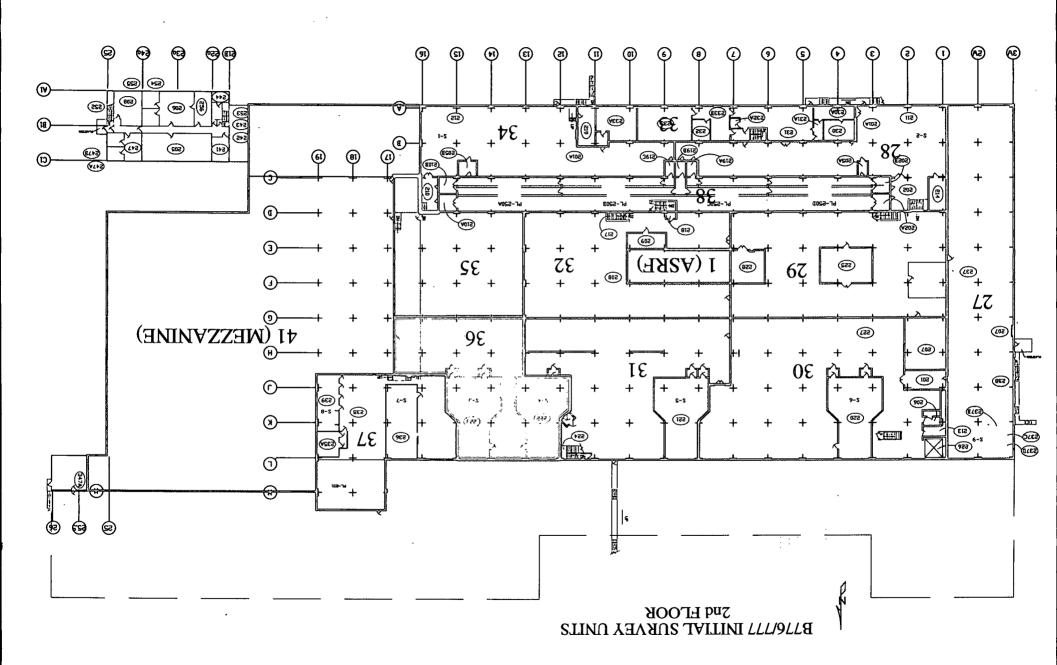
Copy

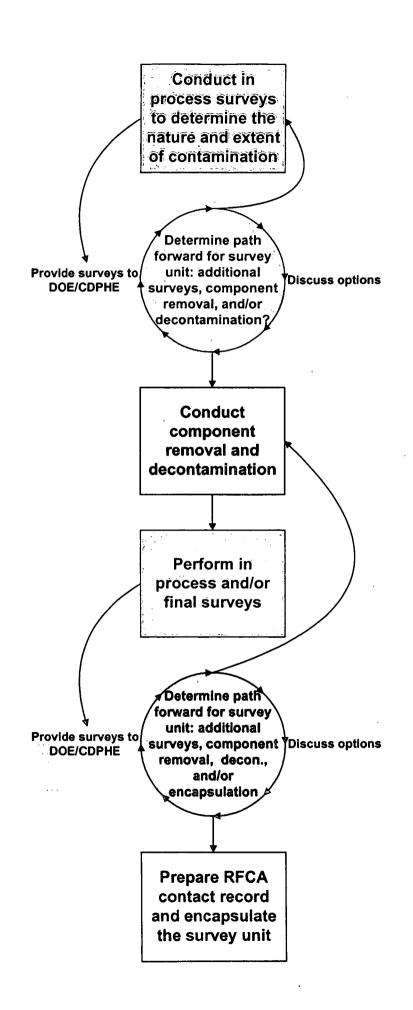
October 2004



ADMIN RECORD

1/32





Survey Instructions Building 776 2nd Floor Survey Unit 776036

Purpose:

This instruction provides guidance for collecting gross gamma and removable contamination data to quantify the amount of residual contamination in Survey Unit 776036 prior to demolition. NaI measurements are performed in accordance with "INS-535-Ludlum2350-1 with Sodium Iodide Detector".

Equipment and materials:

- 1. A Ludlum 44-17 attached to a Ludlum 2350-1 set to collect five-minute counts that will be displayed on its LCD window.
- 2. A Bicron G-5 attached to a Ludlum 2350-1 set to collect five-minute counts that will be displayed on its LCD window.
- 3. One Electra with attached DP-6, calibrated and daily response checked.
- 4. Two probe holders, one for the G-5 and one for the 44-17 with tin shielding.
- 5. Calibrated and daily response checked SAC-4.
- 6. Measuring tape or laser range finder.

Note: The NE Electra with DP-6 probe and the Eberline SAC-4 shall be used in accordance with RSP-7.01 and 7.02

Procedure:

- 1. Inspect instrument for obvious damage and ensure battery voltage is equal to or greater than 4.6 volts. If battery voltage is less than 4.6 volts change the batteries.
- 2. Complete daily performance checks for Sodium Iodide detectors to ensure the instrument is functioning properly by using Americium-241 source TS-912. Record results on Sodium Iodide Data Sheet.
- 3. For floor and concrete wall background measurements, perform a 300-second background count with a Bicron G-5 for floors or Ludlum 44-17 for walls at background location in room 119 near column C-9. Record background counts next to "Bkg Floor" or "Bkg Concrete Wall" in background column of attached "Sodium Iodide Data Collection" sheets as needed.
- 4. For block wall background measurements, perform a 300-second background count with a Ludlum 44-17 at background location in room 119 near column C-9. Record background counts next to "Bkg Block Wall" in background column of attached Sodium Iodide data collection sheets as needed.
- 5. For ceiling background measurements, perform a 300-second background count with a Ludium 44-17 at background location in room 119 near column C-9. Hold the probe waist high, pointed toward ceiling using a sheet metal plate in front of the detector (take background measurement in this configuration). Record background counts next to "Bkg Metal Ceiling" in background column of attached Sodium Iodide data collection sheets as needed.
- 6. Mark the sample locations on the surfaces to be measured. Take all measurements on contact with the marked surface using tin side shields on the Bicron G-5 and tin side and back shields on the Ludlum 44-17. All Sodium Iodide readings shall have 300 second count times.
- 7. Collect sodium Iodide, total surface activity and removable surface activity measurements at all locations marked on the attached map.
- 8. Record the NaI and NE Electra measurements on the attached sheet. Note any items or conditions that may have affected the measurement in the "remarks" section.
- 9. Count swipes for 60 seconds with a SAC-4, record result on attached sheet for removable contamination.



Survey Instructions Building 776 2nd Floor Survey Unit 776036

Surface	Type of Survey	ype of Survey Probe		Count Time	
Floor	Total Alpha Activity	Bicron G-5	On contact	300 seconds	
All Surfaces	Total Alpha Activity	Electra with DP-6	On contact	60 seconds	
Block walls			On contact	300 seconds	
All Surfaces	Removable Alpha	SAC-4	Swipe in placed in tray	60 seconds	
Ceiling	Total Alpha Activity	Ludlum 44-17	On Contact	300 seconds	
Block Walls	Background measurement	Bicron G-5 or Ludlum 44-17	On contact with wall in room 119 near column C-9	300 seconds	
Floors and cement walls	Background measurement	Bicron G-5 or Ludlum 44-17	On contact with floor in room 119 near column C-9	300 seconds	
Metal ceilings	Background measurement	Ludlum 44-17	Probe waist high, pointed toward ceiling with sheet metal plate on end in room 119 near column C-9	300 seconds	



Final Survey for Survey Unit 776036

1) Introduction and Scope

A pre-demolition radiological survey (PDS) is performed prior to building demolition to define the radiological conditions of a facility. A PDS survey for survey unit 776036 has been completed in accordance with guidelines outlined in the "Radiological Pre-Demolition Survey Plan Building 776/777". Based on the results it is recommended that no further remediation is needed, and that the survey unit may be encapsulated in preparation for demolition. Isolation controls shall be put in place to prevent recontamination of the area. This report has been prepared in accordance with sections 3 and 8 of the "Radiological Pre-Demolition Survey Plan Building 776/777".

Survey unit 776036 is bounded by column lines 13-16 and G-L. This area is part of the original building and is located in the northeast corner of room 208 on the second floor of building 776.

2) PDS Methods and Techniques

The PDS survey results determine the Average Surface Contamination Value (ASCV_u) and source term for the survey unit. These parameters are used determine whether the building may be demolished within the limits outlined in the "Radiological Pre-Demolition Survey Plan Building 776/777".

To obtain a statistically powerful number of data points, a minimum of 30 survey points were selected per survey unit. A random start, systematic grid method was used to identify the survey point locations. Three types of surveys are performed at each survey point as follows:

- a) Painted surfaces are evaluated for potential contamination under coatings using sodium iodide (NaI) gamma detectors attached to a single channel analyzer windowed for the 59 keV gamma-ray (Am²⁴¹).
- b) Direct alpha surface contamination measurements are performed using a NE Electra survey instrument with attached DP-6 probe. This data may be compared to the NaI survey data to show the fraction of contamination that is directly on the surface verses imbedded in the material matrix.
- c) Removable surface alpha contamination surveys were performed by swiping the survey point with a 47mm filter paper then counting the filter paper on a SAC-4 alpha counter. This data may be used to gauge the effectiveness of encapsulation following the PDS.

To conservatively determine the final Average Surface Contamination Value (ASCV_u) for the survey unit, the source term associated with inaccessible areas of the survey unit (as described in section 4 of this report) is added to the source term calculated by the PDS survey.

3) ALARA Post Remediation Surveys

In addition to the PDS used to determine the Average Surface Contamination Value (ASCV_u) and source term for the survey unit, surveys were taken to determine the effectiveness of remediation efforts. Remediation is performed to demonstrate a reasonable best effort is made to maintain releases to the environment and doses to the workers ALARA. Remediation may include decontamination, or removal of parts of the structure such as block wall removal.

a) Floors

The floors of survey unit 776036 consist of paint covered concrete. Measurements collected on the floor of 776036 show that the approximately 50% of the floor has activity below levels that were near the MDA of the sodium iodide instruments. Survey grids 36-3, 36-4, 36-16A, 36-25A, 36-24A, 36-32A, 36-33A, 36-34A, 36-35, 36-36A, 36-41, 36-45,36-48, 36-49 and 36-50 had elevated activities during the in-process characterization survey and were shaved before being re-surveyed. Remediation of the elevated floor areas resulted in a decontamination factor (DF) of 2.3, or a source term reduction of 57%.

Table 1: Floor Remediation Results

	Pre-Remediation (in-process)	Post-Remediation (Follow-up)
Maximum (dpm/100cm ²)	2,192,857	99,900
Minimum (dpm/100cm ²)	15,464	12,632
Average (dpm/100cm ²)	109,360	46,201
Average (μCi/m²)	4.93	2.1
Source Term (μCi)	2631	1121

b) Walls

Walls of survey unit 776036 were surveyed during the in process characterization using a 10 foot wide by 5 foot high grid system. Since data was collected in this manner during the in-process survey, data was collected this way for the follow-up survey report. One hundred and seven measurements were collected on the walls following the 10 foot by 5 foot grid pattern. During the in-process survey the probe is held 30 cm (~12 inches) from the surface to be surveyed. This survey method can lead to over estimation of average contamination levels due to "shine" from nearby hotspots. Wall survey points 36-232, 36-235 and 36-263 were found to have elevated levels of contamination. Follows up surveys were performed by taking contact readings near each of the elevated survey points and averaging the results to provide a more accurate estimate of average contamination levels.

Survey point 36-263 was located near a contaminated seam along the north wall of the survey unit. Contact readings on the wall near the survey point are not above the MDA of the sodium iodide probes.

Survey point 36-32 was biased high by contamination on the floor below it. A contact reading on the survey point was within 20% of background levels.

The table below was compiled using non-weighted averages and a wall surface area of 853 square meters calculated from the final survey map. The lower values in the "Post-Remediation" column are a result of averaging contact readings on walls that were near contaminated seams and floors.

Table 2: Wall Remediation Results

	Pre-Remediation (In-process)	Post-Remediation		
Maximum (dpm/100cm ²)	177,600	94,350		
Minimum (dpm/100cm ²)	12,824	12,824		
Average (dpm/100cm ²)	36,132	34,939		
Average (μCi/m²)	1.63	1.57		
Source Term (µCi)	1390	1342		

c) Ceilings

No ceiling survey points were determined to require remediation during the in-process characterization of survey unit 776036.

Some portions of the ceiling were completely blocked by piping and supply ductwork and were not surveyed with sodium iodide probes during the in-process survey. No follow up sodium iodide readings were taken in the blocked areas. Nearby coupon sampling in the adjacent survey unit 776031 indicated that the blocked areas had no more potential for being contaminated than the accessible areas.

Table 3: Ceiling Remediation Results

	Pre-Remediation (In-process)	Post-Remediation
Maximum (dpm/100cm ²)	31,608	31,608
Minimum (dpm/100cm ²)	12,877	12,877
Average (dpm/100cm ²)	24,731	24,731
Average (μCi/m²)	1.11	1.11
Source Term (μCi)	595	595

4) Inaccessible Areas

a) Floors

One inaccessible area was identified on the floor of survey unit 776036 located in survey grids 36-3 and 36-4. The seam along the north wall was found to be contaminated at the same levels as the seam in survey unit 776037. The contaminated material was removed but readings in the seam remained about the same due to "shine" from the contaminated portions of the north wall of room 430 below.

The highest reading on the material removed from the seam was $568,875 \text{ dpm/}100\text{cm}^2$. The average value for the joint material that was removed from the seam was $388,223 \text{ dpm/}100\text{cm}^2(17.49\mu\text{Ci/m}^2)$. Approximately 20 feet (6.0 m) of this material was removed from a crevice that was 6 inches (0.15m) deep and contaminated on both sides. The amount of activity removed from the seam on the north wall is estimated as, $1.8 \text{ m}^2 \text{ x} 17.49\mu\text{Ci/m}^2 = 31.5\mu\text{Ci}$.

Because of the radiation emanating from the contaminated wall below, it is not possible to measure the amount of contamination remaining in the seam directly. It is conservatively estimated that 31.5µCi remains in the seam.

b) Walls

No inaccessible areas were identified on the walls of survey unit 776036.

c) Ceilings

No inaccessible areas on the ceiling of survey unit 776036 are expected to be more contaminated than the accessible surfaces.

5.) PDS Survey Results Summary

The values for the accessible areas and inaccessible areas were summed and divided by the total area for the survey unit to calculate the "Average Surface Contamination Value" $(ASCV_u)$ and source term for the survey unit. The results are summarized in Table 4 below:

Table 4: PDS Final Results

	Final Results
776036 Source Term Inaccessible Areas (μCi)	31.5
776036 Source Term Accessible Areas (μCi)	1421
776036 Total Source Term (μCi)	1452.5
Survey Unit Area (m²)	1921
ASCV _u (μCi/m²)	0.76
ASCV _u (dpm/100cm²)	16,786

Table 6 Notes:

- a) Inaccessible areas source term from Section 4 of this report.
- b) Accessible area source term is the average contamination value from the PDS survey applied to the total accessible surface area of the survey unit (1921 m²).
- c) Total Source Term equals the sums of the source terms of Inaccessible Area + Accessible Area.
 - Total Source Term = $(31.5 + 1421) \mu Ci = 1452.5 \mu Ci$
- d) Average Surface Contamination for the Survey Unit (ASCV_u) in dpm/100cm² equals: $ASCV_u = (1452.5 \ \mu Ci)(22,200 \ dpm/100cm^2 / 1 \ \mu Ci/m^2) / (1,921 \ m^2) = 16,786 \ dpm/100cm^2$

Survey Unit 776036 Summary

Total Surface Activity Measurements

30 Number Required	30 Number Obtained]
MIN	2,502	dpm/100 cm ²
MAX	55,577	dpm/100 cm ²
Average	16,422	dpm/100 cm ²
STD DEV	15,587	dpm/100 cm ²

Total Surface Area	1921	m²
Inaccessible Areas	31.5	μCi, Alpha
Accessible Surfaces	1421.0	μ Ci, Alpha

Total inventory	1452.5	μCi, Alpha
ASCV _u	16,786	dpm/100cm ²
ASCV _u	0.76	μCi per m²

Sample Location	Nal Activity Measurements								
Number	Measurement Used	Comment	Surface	Coating	(dpm/100 cm ²)				
1	Sodium lodide	N/A	Wall	Thin/No Paint	2,502.3				
2	Sodium Iodide	N/A	floor	Thin/No Paint	3,732.2				
3	Sodium lodide	N/A	floor	Thin/No Paint	23,955.5				
4	Sodium lodide	N/A	Wall	Thin/No Paint	32,003.0				
5	Sodium Iodide	N/A	floor	Thin/No Paint	18,964.8				
6	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3				
7	Sodium Iodide	N/A	Wall	Thin/No Paint	25,944.8				
8	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3				
9	Sodium Iodide	N/A	Wall	Thin/No Paint	21,598.7				
10	Sodium lodide	N/A	Wall	Thin/No Paint	55,577.2				
11	Sodium Iodide	N/A	Wall	Thin/No Paint	46,885.1				
12	Sodium Iodide	N/A	Floor	Thin/No Paint	4,485.3				
13	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3				
14	Sodium Iodide	N/A	Floor	Thin/No Paint	4,485.3				
15	Sodium Iodide	N/A	Floor	Thin/No Paint	4,485.3				
16	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3				
17	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3				
18	Sodium Iodide	N/A	Wall	Thin/No Paint	42,539.0				
19	Sodium Iodide	N/A	Wall	Thin/No Paint	46,226.6				
20	Sodium lodide	N/A	Wall	Thin/No Paint	8,112.8				
21	Sodium lodide	N/A	Wall	Thin/No Paint	38,709.9				
22	Sodium Iodide	N/A	ceiling	Thin/No Paint	5,557				
23	Sodium Iodide	N/A	ceiling	Thin/No Paint	6,848				
24	Sodium lodide	N/A	ceiling	Thin/No Paint	5,557				
25	Sodium Iodide	N/A	Floor	Thin/No Paint	4,485.3				
26	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3				
27	Sodium lodide	N/A	Wall	Thin/No Paint	10,430.8				
28	Sodium lodide	N/A	Wall	Thin/No Paint	21,209.3				
29	Sodium Iodide	N/A	ceiling	Thin/No Paint	12,511.5				
30	Sodium Iodide	N/A	ceiling	Thin/No Paint	5,557.3				
<u> </u>	233.2104.93	- 47	19		2,200				
		CHARLES TO THE STATE OF THE STA		MIN	2,502				
The state of the s				MAX	55,577				
				AVERAGE	16,422				
				SD	15,587				
					10,001				

Location #	E/W Column letter	N/S Column Number	DistanceN orth	Distance East	Elevation	dpm/100cm2 PRE REMEDIATION	dpm/100cm2 POST REMEDIATION
36-1	EQUIP	EQUIP	EQUIP	EQUIP	ĘQUIP	EQUIP	EQUIP
36-2	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP
36-3	K	13	20	8	0	321,096	84,664
36-3A	K	13	12	4	Ô	34,748	12,677
36-4	К	13	20	18	0	330,507	90,209
36-4A	K	13	11	11	0	38,448	38,448
36-5	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP
36-6	EQUIP	EQUIP	ĒQUIP	ÉQUIP	ËQUIP	EQUIP	EQUIP
36-7	EQUIP	EQUIP	EQUIP	EQUIP	ÈQUIP	EQUIP	EQUIP
36-8	EQUIP	EQUIP	ĒQUIP	EQUIP	EQUIP	EQUIP	ÉQUIP
36-9	К	13	2	11	0	37,965	37/965
36-9A	К	13	9	12	0	15,464	15,464
36-10	К	13	9	7	0	42,952	42,952
36-11	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP
36-12	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	- ÉQUIP
36-13	J	11	12	18	0	54,776	. 54 776
36-13A	J	11	16	19	0	55,902	55,902 ^t
36-14	J	12	15	5	0	15,464	15,464
36-15	J	12	12	20	0	15,464	15,464
36-16	J	13	14	. 4	0	60,246	60,246
36-16A	J	13	15	8	0	110,839	12,677
36-17	J	13	12	16	0	71,989	71,989
36-17A	J	13	15	18	0	45,285	45 285
36-17B	J	13	15	12	0	91,052	91,052
36-18	J	14	14	1	0	17,776	17,776
36-19	J	14	13	19	0	15,464	15,464
36-20	J	15	13	2	0	39,735	39,735
36-21	J	15	7	5	0	73,357	73 357
36-22	J	14	7	15	0	27,670	27,670
36-23	J	14	1	8	0	54,937	54 937
36-23A	J	14	2	2	0	37,080	37,080
36-24	J	13	2	16	0	76,252	76,252
36-24A	J	13	5	11	0	111,483	12,677
36-24B	J	13	10	11	0	117,676	28,921
36-25	J	13	9	3	0	54,374	54,374
36-25A	J	13	2	8	0	106,013	12,677
36-26	J	12	3	17	0	24,613	24,613
36-27	J	12	1	7	0	52,846	52,846
36-27A	J	12	2	11	0	26,543	26,543
36-28	J	11	2	14	0	68,852	68,852
36-29	Н	11	19	15	0	108,052	32,604

Location #	E/W Column letter	N/S Column Number	DistanceN orth	Distance East	Elevation	dpm/100cm2 PRE REMEDIATION	dpm/100cm2 POST REMEDIATION
36-30	Ħ	12	19	6	Ô	84,291	84,291
36-31	Н	12	16	19	0	56,627	56,627
36-32	H	13	19	6	0	114,469	43,906
36-32A	Н	13	20	9	0	135,281	22,327
36-32B	Н	13	11	7	0	92,702	92,702
36-33	Н	13	17	16	0	94,430	94 430
36-33A	Н	13	19	11	0	115,509	** *70.578*-
36-33B	Н	13	11	17	0	72,844	272844
36-34	Н	14	19	9	0	67,034	12,662
36-34A	Н	14	12	6	0	115,856	់រៅ2 632
36-34B	Н	14	12	10	0	112,214	12 632
36-35	Н	14	17	15	0	111,954	S. 12,632
36-35A	Н	14	11	15	0	95,738	4 4.95,738
36-35B	Н	14	11	20	0	112,734	35 364 VA
36-35C	Н	14	19	20	0	17,839	A 17/839 MA
36-36	Н	15	17	2	0	58,396	12,632
36-36A	Н	15	11	3	_0	189,134	95 ,111
36-36B	Н	15	14	7	O.	101,981	95.101
36-37	Н	16	7	17	0	17,839	17/889
36-38	Н	16	3	9	0	17,839	MANA 17.839
36-39	Н	15	7	15	0	54,113	54,113
36-39A_	Н	15	4	11	0	37,029	4
36-40	H	15	4	3	0	51,858	64-51,858
36-41	Н	14	1	18	0	119,585	68,8777
36-41A	Н	14	5	16	0	82,123	<u> </u>
36-42	<u>H</u>	14	2	9	0	96,605	<u>. 96,605</u>
36-43	<u> </u>	13	9	14	0	82,209	55,160
36-43A	H	13	6	14	0	62,091	62.091
36-44	Н	13	2	1	0	195,464	32.60A
36-44A	Н	13	4	4	0	110,133	\$2,604
36-45	G	13	12	1	. 0	156,527	32,604
36-46	G	13	12	14	0	98,339	98,339
36-46A	G	13	16	12	00	99,900	##99 900 # #
36-47	G	14	12	5	0	59,923	. 59 923
36-48	G	14	17	17	0	216,190	32,604
36-48A	G	14	15	14	0	101,895	11 34 179 4
36-49	G	15	18	5	0	118,198	32,604
36-50	G	15	12	5	0	34,688	14.34;688¥
36-51	G	16	15	6 _	0	17,743	17,743
36-52	G	16	18	13	0	17,743	17,743
36-53	G	16	4	18	0	17,743	17,743
36-54	G	16	3	6	0	17,743	17,743

Location #	E/W Column letter	N/S Column Number	DistanceN orth	Distance East	Elevation	dpm/100cm2 PRE REMEDIATION	dpm/100cm2 POST REMEDIATION
36-55	G	15	3	15	0	28,964	28,964
36-56	G	15	7	2	0	93,570	93,570
36-57	G	14	4	17	0	46,828	46,828
36-58	G	14	8	5	0	41,278	41,278
36-59	G	13	2	11	0	50,593	50,593
36-60	G	13	6	1	0	547,439	
36-60A	G	13	6	5	0	87,915	12 632
36-60B	G	13	4	1	0	2,192,857	57,302
36-61	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP
36-62	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	SEQUIP.
36-63	K	13	16	9	14	31,608	¥4-31,608# 3
36-64	K	13	17	16	14	31,608	31 608
36-65	EQUIP	ÉQUIP	EQUIP	EQUIP	EQUIP	25,754	¥25:754 3.60
36-66	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	25,754	25 754
36-67	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	25,754	1 25 754 W
36-68	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	25,754	25.754
36-69	Κ	13	7	13	14	31,608	61,608 74
36-70	К	13	7	8	14	31,608	30,608 W.C
36-71	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	WE REQUIR
36-72	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	E E QUIP (€ \)
36-73	J	11	16	18	13	31,608	31,6084
36-74	J	12	17	6	13	31,608	#31,608b≤e
36-75	J	12	17	15	13	31,608	31,608
36-76	J	13	13	. 3	13	31,608	\$431,608
36-76A	J	13	19	9	14	31,608	231,608
36-77	J	13	13	17	13	12,877	2,87,7
36-77A	J	13	20	13	14	31,608	31/608
36-78	J	14	15	5	13	12,877	4412/8774年
36-79	<u> </u>	14	15	14	13	12,877	12.877
36-80	J	15	15	4	13	12,877	12,3777
36-81	J	15	8	4	13	12,877	2 377. · · ·
36-82	J	14	.11	19	12	12,877	\$ 46 12/87/465
36-83	J	14	10	3	12	12,877	12877
36-84	J_	13	3	. 17	13	12,877	12.877
36-84A	J	13	5	11	14	31,608	/ ¹ 31′,608
36-85	J	13	4	4	13	31,608	31,608
36-85A	J I	13	7	7	14	31,608	31,608
36-86 36-87	J J	12 12	8 5	20 1	12 12	31,608 31,608	31,608 31,608
36-88	J	11	8	17	13	31,608	31,608
36-89	Н	11	17	17	13	31,608	31,608
36-90	Н	12	19	1	12	31,608	31,608
36-91	Н	12	19	19	12	31,608	31,608

	E/W	N/S		1			dpm/100cm2
Location #	Column letter	Column Number	DistanceN orth	Distance East	Elevation	dpm/100cm2 PRE REMEDIATION	
36-92	Н	13	19		13		
36-92A	H	13	16	_29	14	31,608	31,608
36-92A 36-93	H	13	16	17	13	31,608	31,608
36-93A	Н	13	13	18	14	12,877	12,877
			***************************************			31,608	31,608
36-94	<u> Н</u>	14	19	3	12	12,877	12,877
36-94A	<u> </u>	14	13	17	14	31,608	31,608
36-95	H	14	16	20	12	12,877	12,877
36-95A	Н	14	13	14	14	31,608	31,608
36-96	H	15	20	5	13	12,877	ni 2 87.7
36-96A	Н	15	. 14	2	14	31,608	- 31 608
36-97	DUCT	DUCT	DUCT	DUCT	DUCT	25,754	25.754
36-98	DUCT	DUCT	DUCT	DUCT	DUCT	25,754	25,754
36-99							
	<u>H</u> .	15	_ 5	16	. 14	12,877	12.877
36-100	H	15	6	10	14	12,877	12(877)
36-101	<u>H</u>	14	6	19	14	12,877	*
36-102	H	14	3	7	14.	12,877	14012 877/40 C
36-103	Н	13	4	14	14		a. 12.377
36-104	H G	13.	5	10	. 14	12,877	500 12,877
36-105 36-106	G	13 13	16	9 13	14	12,877	612/87// 46 1
36-106	G	14	13 14	4	14	12,877	19112 87 04
36-107	G	14	13	17	14		12,877
36-108	G	15	15	4	14	12,877	14-11/21877##
36-110	G	15	. 14	13	14 14	12,877 12,877	・ 12:87:74株 は連進12:87/4株
36-111	DUCT	DUCT	DUCT	DUCT	DUCT	DUCT	DUCT
36-112	DUCT	DUCT	DUCT	DUCT	DUCT	DUCT	25 M DUCTON
36-113	DUCT	DUCT	DUCT	DUCT	DUCT	DUCT	
36-114	DUCT	DUCT	DUCT	DUCT	DUCT	DUCT	LE EDUCHION
36-115	G	15	8	13	14	12,877	- 12 8 77 15 1
36-116	G	15	7	4	14	12,877	12/8/7/2004
36-117	G	14	7	14	14	12,877	444 12.877 44 4
36-118	G	14	5	7	14	12,877	**************************************
36-119	G	13	4	18	14	12,877	12,877
36-120	G	13	7	10	14	12,877	## 12 870 M
36-127	Н	11	17	14	3		排除40 5330
36-128	Н	11	20	12	7	31,081	# 3 08
36-129	Н	11	1	14	1	52,170	海第52月70
36-130	ل	11	9	12	9	31,081	77.81.081
36-131	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	MINACCESS*
36-132	J	11	15	12	9	31,081	31,081
36-133	J	11	20	9	<u> </u>	31,081	31;081
36-134	J	11	20	9	6.5	31,081	31(081
36-135	J	11	1	16	5	67,105	67,105%
36-136	K	11	11	16	10	67,609	67;609≉₹
36-137	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS
36-138	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS
36-139	K	13	18	3	1	50,959	50,959

	E/W Column	N/S Column	DistanceN	Distance		dpm/100cm2 PRE	
Location #	letter	Number	orth	East	Elevation	REMEDIATION	REMEDIATION
36-140	K	13	17	3	7	31,081	<u>31,081</u>
36-141	K	13	9	3	2	31,081	31,081
36-142	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCEŜŜ	INACCESS
36-143	J	13	14	7	5	40,868	40,868
36-144	J	13	18	5	7.5	31,081	31,081
36-145	J	13	7	12	3	64,380	64,380
36-146	Ĵ	13	13	7	7	53,482	53,482
36-147	J	13	7	7	2	80,660	80,660
36-148	J ,	13	7	7	8	31,081	31,081
36-149	J	13	20	7	5	66,230	·∗≮66;230 *
36-150	H	13	20	7	10	32,291	321291
36-151	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	NINACCESS
36-152	Н	13		4	_2	39,960	39,960
36-153	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	MINACCESS*
36-154	H	12	14	11	1	61,790	¥61¶790¥¥
36-155	INACCESS	INACCESS	INACCESS	INACCESS	INÁCCESS	INACCESS	₩INACCESS>
36-156	Н	12	14	0	1	93,980	493 !980
36-157	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	≥INACCESS #
36-158	Н	11	14	18	1	86,210	36 210
36-159	Н	11	20	7	1	66,806	66,806
36-160	K	13	20	6	7	12,824	2824
36-161	K	13	20	17	1	70,917	70.917
36-162	K	13	20	15	<u>7</u>	12,824	12824
36-163	K	13	20	18	2	177,600	*# 24 7/28 ##
36-164	K	13	18	18	9	32,211	###32 211 Will
36-165	K	13	10	18	1	40,868	##40/868##
36-166	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	MINACCESS*
36-167	K	13	16	15 _	11	47,932	#347/932 ##
36-168	J	13	17	16	10	32,211	A 32 24 W
36-169	J	13	13	14	2	94,350	月48947350 日本
36-170	J	13	14	14	7	32,211	32241
36-171	J	13	6	14	2	74,168	744 68
36-172	J	13	1	14	6	35,318	35 S 18 644
36-173	J	13	16	14	2	32,211	3221
36-174	H	13	17	14	9	32,211	4 82 21 M
36-175	Н	13	14	18	2	52,977	52.9/7
36-176	_INACCESS	INACCESS	_INACCESS	INACCESS	INACCESS	INACCESS	MINACCESS?
36-177	Н	13	10	6	2	40,868	40.868
36-178	INACCESS	INACCÉSS	INACCESS	INACCESS	INACCESS	INACCESS	MINACCESS®
36-179	H	14	14	11	3	49,445	###49 445 FF
36-180	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	INACCESS	*INACCESS
36-181	н	15	16	7	1	53,986	53,986*
36-182	H	15	17	7	7	32,636	32;636 [™]
36-183	Ħ	15	Î	7	2	45,409	45.409
36-184	J	15	4	7	7	32,636	32,636
36-185	J	15	13	7	6	_ 32,636	32,636
36-186	J	15	11	7	8	32,636	32¦636°
36-187	J	15	16	6	3	62,059	62,059
36-188	J	15	17	5	8	32,636	32,636*

i I	E/W Column	N/S Column	DistanceN	Distance		d (100 0 DDF	dpm/100cm2
Location #	letter	Number	orth	East	Elevation	dpm/100cm2 PRE REMEDIATION	POST REMEDIATION
36-189	Ĵ	15	3	3	- 3	32,636	32,636
36-190	K	15	1	3	7	32,636	32,636
36-191	K	15	17	3	2	83,755	83,755
36-192	K	15	1Ĝ	3	8	32,636	32,636
36-193	K	15	12	<u>3</u>	3	12,824	12,824
36-194	H	15	11	7	5	12,824	12,824
36-195	H	14	13	2	4	12,824	12,824
36-196	ÊQUIP	EQUIP	EQUIP	EQUIP	ĒQUIP	DUCT	DUCT
36-197	DUCT	EQUIP	EQUIP	EQUIP	EQUIP	DUCT	DUCT
36-198	DUCT	EQUIP	EQUIP	EQUIP	EQUIP	DUCT	→DUÖT-
36-199	DUCT	EQUIP	_EQUIP	EQUIP	EQUIP	DUCT	DUCT
36-200	DUCT	EQUIP	EQUIP	EQUIP	EQUIP	DUCT	DUCT
36-201	DUCT	EQUIP	EQUIP	EQUIP	EQUIP	DUCT	DUCTA
36-202	DUCT	DUCT	DUCT	DUCT	DUCT	DUCT	MADUCTANA
36-203	DUCT	DUCT_	DUCT	DUCT	DUCT	DUCT	IDUCTE:
36-204	G	13	1	Ô	2	12,824	/ ¥12.8241 ·
36-205	G	13	9	00	8	12,824	12,824
36-206	G	13	12	0	3	13,772	13,7772
36-207	G	13	16	00	8	12,824	112,824
36-208	G	13	Ò	19	4	12,824 °	M2.824
36-209	H	12	00	16	7	12,824	6 6 2 6 2 4 E 5 1
36-210	H	12	19	15	3		**************************************
36-211	<u>H</u>	11	17	15	8	31,608	* ¥31,608 4
36-212	H	11	7	15	1		44.456.509
36-213	J	11	35	15	8		67.431.608.44
36-214	<u>J</u>	11	15	16	<u>2</u>	70,636	*70.636 M
36-215	J	11	18	18	<u> </u>	31,608	**************************************
36-216	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		ECURAL
36-217	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIPMENT
36-218	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		###E@URAY
36-219	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		LGAEQUIPASA
36-220	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		CEQUIPM
36-221	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		EWEQUIPMEN
36-222 36-223	EQUIP EQUIP	EQUIP EQUIP	_ EQUIP_	EQUIP	EQUIP EQUIP		EQUIPANA EQUIPANA
36-224	EQUIP	EQUIP	EQUIP	EQUIP EQUIP	EQUIP .		EQUE IN
36-225	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	WANTE GUI BANK
36-226	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		EQUIPME
36-227	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP		EQUIP IN
36-228	از تونو ت	13	19	Ż Ż	2	31,608	1.931.608163
36-229	J J	13	18	4	8	31,608	31,608
36-230	J	13	4	5	3	54,491	54.4912
36-231	J	13	8	5	8	31,608	31,608
36-232	J	13	17	5	1	113,523	15:082
36-233	H	13	17	5	7	41,877	41:877
36-234	H	13	16	3		73,664	73:664
36-235	H	13	16	1	<u>2</u> 7	120,082	20,080
36-236	H	13	16	20	2	52,473	52,473
36-237	H	12	16	16	<u>2</u> 8	31,608	31,608

	E/W	N/S	Distance	Distance			dpm/100cm2
Location #	Column letter	Column Number	DistanceN orth	Distance East	Elevation	dpm/100cm2 PRE REMEDIATION	POST REMEDIATION
36-238	<u>H</u>	12	16	0	3	46,418	46,418
36-239	H	12	16	7	8	31,608	31 608
36-240	H	12	16	18	3	31,608	31,608
36-241	H	11	16	19	7	31,608	31,608
36-242	H	11	18	15	1	13,978	13!978
36-243	H	13	17	15	7	12,950	12,950
36-244	H	13	9	15	2	21,172	****21*172**
36-245	ل ا	13	2	15	6	15,211	44 8 4 5 21 1
36-246	J	13	15	15	Ž	12,824	12,824
36-247	J	13	16	15	8	12,824	· 12,824
36-248	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	新海EQUIP
36-249	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	< ¥ EQUIP
36-250	EQUIP	EQUIP	_ EQUIP	EQUIP	EQUIP	EQUIP	***EQUIP***
36-251	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	₩ MEQUIR \$
36-251A	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	WEQUIP !
36-252	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP_	EQUIP	AND EQUIPME
36-253	EQUIP	EQUIP	EQUIP	EQUIP	_EQUIP	EQUIP	EQUIPATE
36-254	EQUIP	EQUIP_	EQUIP	_EQUIP	EQUIP	EQUIP	A EQUIP
36-255	_EQUIP_	EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	A EQUIPME
36-256	EQUIP	_EQUIP	EQUIP	EQUIP	EQUIP	EQUIP	EQUIRANT
36-257	EQUIP	_ EQUIP_	EQUIP	_ EQUIP	_ EQUIP	EQUIP	EQUIPAGE
36-258	EQUIP	_EQUIP	EQUIP_	_ EQUIP	_EQUIP	EQUIP	WA EQUIRME
36-259	J	15	15	3	3	12,824	F181248
36-260	٦	15	15	3	8	12,824	***** 12.824**/*
36-261	<u> </u>	15	3	6	3	12,824	48 12,824
36-262	J	15	3	6	8	12,824	12824
36-263	J	_15	18	6	8	12,824	# 12.824
36-264	H	15	18	6	3	17,678	和加州678職
36-265	Н	15	16	2	2	12,824	44121824W
36-266	Н	15	16	3	7	12,824	12 824 W
36-267	<u> </u>	15	16	<u> 15</u>	1	24,050	44050重新
36-268	Н	14	16	16	7	12,824	12.824
36-269	Н	14	16	8	2	12,824	12.324
36-270	H	14	16	88	8	12,824	12,824
36-271		14	16	18	1	18,089	2006年8月8月8日
36-272	Н	13	16	16	7	12,824	12824
36-273	INACCESS	NACCESS	INACCESS	INACCESS	INACCESS	INACCESS	端INACCESS 素
36-274	Н	15	13	7	2	12,824	沙峰 12,824家然
36-275	H	15	12	2	6	12,824	** 12,824
36-276	Н	15	12	6	4	12,824	维和2.824 等
36-277	H	14	12	2	3	12,824	12,824

Removable Activity

Survey	Area:	2nd Floor	Surve	y Unit:	776036
Dates Counted:	10/28/04	12/29/04	11/1/04		
A priori MDA:	16				
Efficiency (c/d)	0.333				
		<u> </u>			<u> </u>
Smear Location			Smear Results	5	
Number	RCT ID#	Serial Number	Gross (cpm)	Bkg.	(dpm/100 cm ²)
1	1	847	0	0.2	-1
2	1	1051	2	0.0	6
3	1	1051	10	0.1	30
4	1	847	0	0.2	-1
5	1	847	0	0.2	-1
6	1	1352	2	0.3	5
7	1	1051	0	0.1	0
8	1	828	ō	0.6	-2
9	1	847	0	0.1	0
10	1	1051	0	0.1	0
11	1	847	0	0.2	-1
12	· 1	1352	1	0.3	2
13	1	1352	1	0.3	2
14	1	1352	1	0.3	2
15	1	1352	1	0.3	2
16	1	1479	0	0.3	-1
17	1	828	0	0.6	-2
18	1	1051	1	0.1	3
19	1	847	1	0.2	2
20	1	1479	0	0.3	-1
21	11	828	0	0.6	-2
22	1	1051	0	0.1	0
23	1	847	0	0.1	0
24	1	1051	0	0.1	0
25	1	1352	1	0.3	2
26	1	1479	0	0.3	-1
27	1	828	0	0.6	-2
28	1	1479	0	0.3	-1
29	1	847	0	0.2	-1
30	1	1051	0	0.1	0
	S. Marie Mar			MIN	-1.8
				MAX	29.7
				MEAN	1.4
المستششين				SD	5.7

Total Surface Activity

·		1018	ıı Surr	<u>ace</u>	ACU	VILY		
Survey	Area:	2nd Floor	Survey (Jnit:	776036			
Meter I	Model:	*	NE Electra w	/ DP6 Pr	obe		Dates Counted:	10/28/04
Instrun	nent #:	4066	4070	n/a	n/a	n/a	A priori MDA:	94
Cal. Du	e Date:	4/20/05	3/3/05	n/a	n/a	n/a	Avg. Local Bkgd	4.2
Efficienc	cy (c/d):	0.228	.221.	n/a	n/a	n/a	Avg. Efficiency	0.228
Sample								_
Location #	RCT ID#	Inst.#	Instrument	(cpm)		gd (cpm)	(dpm/100 d	cm²)
1	1	1	4		1		13.2	
2	1	1	38		4.		149.1	
3	11	1	621		2.		2714.9	
4	1	1	6		· 3.		13.2	
5	1	1	9		3.		26.3	
6	1	1	13		6.		30.7	
7	1	1	13		.3.		43.9	
8	1	1	10		4.		26.3	
9	1	1	_6		6.		0.0	
10	1	1	9		8.		4.4	
11	1	1	24	·	8.		70.2	•
12	1	1	18		5.	0	57.0	
13	1	11	16		5.		48.2	
14	1	1	7		7.	0	0.0	
15	1	1	38		3.	0	153.5	
16	1	1	5		3.	0	8.8	
17	1	1	3		3.	0	0.0	
18	1	1	8		12	.0	-17.5	
19	1	11	4		5.	0	-4.4	
20	1	11	1		6.	0	-21.9	
21	1	1	14		7.	0	30.7	
22	1	1	· <u>1</u>		0.	0	4.4	
23	1	1	13		3.	0	43.9	
24	1	. 1	2		1.	0	4.4	
25	1	1	10		5.	0	21.9	
26	1	1	6		2.	0	17.5	
27	1	1	7		5.	0	8.8	
28	11	1	5		2.	0	13.2	
29	1	1	8		2.	0	26.3	
30	1	1	4	Vel	2.		8.8	
	ران المراسطينية المراسطينية المراسطينية المراسطينية المراسطينية المراسطينية المراسطينية المراسطينية المراسطين	Commence of the second	Vergen - Agent			MIN	-21.9	
						MAX	2714.9	
	eg typerities			· • • • • • • • • • • • • • • • • • • •		MEAN	116.5	
2000	- Section	the transfer	t keet in the contract		2	SD	492.4	

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Simple Leastion	Nal Activity Measurements							
Sample Location Number	Measurement Used	Comment	Surface	Coating	(dpm/100 cm ²)			
1	Sodium lodide	N/A	Wall	Thin/No Paint	2,502.3			
2	Sodium lodide	N/A	floor	Thin/No Paint	3,732.2			
3 ,	Sodium Iodide	N/A	floor	Thin/No Paint	23,955.5			
4	Sodium lodide	N/A	Wall	Thin/No Paint	32,003.0			
5	Sodium lodide	N/A	floor	Thin/No Paint	18,964.8			
6	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3			
7	Sodium Iodide	N/A	Wall	Thin/No Paint	25,944.8			
8	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3			
9	Sodium lodide	N/A	Wali	Thin/No Paint	21,598.7			
10	Sodium Iodide	N/A	Wall	Thin/No Paint	55,577.2			
11	Sodium lodide	N/A	Wall	Thin/No Paint	46,885.1			
12	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3			
13	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3			
14	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3			
15	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3			
16	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3			
17	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3			
18	Sodium lodide	N/A	Wall	Thin/No Paint	42,539.0			
19	Sodium lodide	N/A	Wall	Thin/No Paint	46,226.6			
20	Sodium lodide	N/A	Wall	Thin/No Paint	8,112.8			
21	Sodium lodide	N/A	Wall	Thin/No Paint	38,709.9			
22	Sodium lodide	N/A	ceiling	Thin/No Paint	5,557			
23	Sodium lodide	N/A	ceiling	Thin/No Paint	6,848			
24	Sodium lodide	N/A	ceiling	Thin/No Paint	5,557			
25	Sodium lodide	N/A	Floor	Thin/No Paint	4,485.3			
26	Sodium lodide	N/A	Wall	Thin/No Paint	7,828.3			
27	Sodium lodide	N/A	Wall	Thin/No Paint	10,430.8			
28	Sodium Iodide	N/A	Wall	Thin/No Paint	21,209.3			
29	Sodium Iodide	N/A	ceiling	Thin/No Paint	12,511.5			
30	Sodium lodide	N/A	ceiling	Thin/No Paint	5,557.3			
			, , , , , , , , , , , , , , , , , , ,					
		THINININI		MIN	2,502			
				MAX	55,577			
				AVERAGE	16,422			
				SD	15,587			
				30	10,001			



Data and Sodium Iodide Instrument Information

Survey Area:	2nd Floor Survey Unit:	776036	Survey Date(s):	10/28/04
				10/29/04

Instrument Specifications

Instrument #	1	2
Meter Model:	Ludlum 2350-1	Ludium 2350-1
Meter Serial #:	203457	193699
Detector Model:	Bicron G-5	Ludlum 44-17
Detector #:	B940T	15157
Detector Size (cm²):	125	17.8
Calibration Due Date:	12/3/04	3/5/05
Count Time (mln)	5	5
Contact Efficiency	6.05%	7.90%

Background (Gross)

instrument #	1	2
Gamma (Ceilings)	N/A	N/A
Gamma (Floors)	8004	N/A
Gamma (Block Walls)	N/A	843
Gamma (Solid Walls)	N/A	N/A

Background (cpm)

instrument #	1	2
Gamma (Ceilings)	N/A	N/A
iamma (Floors)	1600.8	N/A
Gamma (Block Walls)	N/A	168.6
Gamma (Metal Walls)	N/A	N/A

Efficiencies (cpm/dpm)

Instrument #	1	2
Thin/No Paint	0.060	0.079
Epoxy	0.049	0.064
Other	0.057	0.075

Ratio Used

D	044	04
IPu to Am	- 241	0.1
1		• • • •

Comments

In cases where the critical level is greater than the calculated dpm/100cm2, the critical level will be used for statistical analysis.

Count Times for backgrounds and samples are equal.

Attenuation Factors: Based on observation of Walls and Cellings. Epoxy on Floor determined by chip sampling.

Coatings	Thickness (inches)
Thin/No Paint	0.007
Ероху	0.250
Other	0.06

Total Activity Estimates Using Sodium Iodide Instruments

Survey Area: 2nd Floor Survey Unit: 776036 Survey Date(s): 10/28/04

				Critical Level (dpm/cm2)	Total Alpha	
Sample Location #	RCT ID#	Instrument #	Gross Counts	(apriveriaz)	(dpm/cm2)	
1	N/A	N/A	N/A	N/A	N/A	
2	N/A	N/A	N/A	N/A	N/A	
3	N/A	N/A	N/A	N/A	Ņ/A	
4	N/A	N/A	N/A	N/A	N/A	
5	N/A	N/A	N/A	N/A	N/A	
6	1	1	5886	4,485	4,485	
7	N/A	N/A	N/A	N/A	N/A	
8	1	2	1,179	7,828	38,942	
9	N/A	N/A	N/A	N/A	N/A	
10	N/A	N/A	N/A	N/A	N/A	
11	N/A	N/A	N/A	N/A	N/A	
12	1	1	. 4834	4,485	4,485	
13	1	1	5,375	4,485	4,485	
14	1	1	4813	4,485	4,485	
15	1	1	4272	4,485	4,485	
16	1	2	927	7,828	9,735	
17	1	2	1173	7,828	38,246	
18	N/A	N/A	N/A	N/A	N/A	
19	N/A	N/A	N/A	N/A	N/A	
20	1	2	913	7,828	8,113	
21	1	2	1177	7,828	38,710	
22	N/A	N/A	N/A	N/A	N/A	
23	N/A	N/A	N/A	N/A	N/A	
24	N/A	N/A	N/A	N/A	N/A	
25	1	1	5656	4,485	4,485	
26	1	2	856	7,828	7,828	
27	1	2	933	7,828	10,431	
28	1	2	1026	7,828	21,209	
29	N/A	N/A	N/A	N/A	N/A	
30	N/A	N/A	N/A	N/A	N/A	



Estimate Data and Sodium Iodide Instrument Information

Survey Area:	1	Survey Unit:	776036	Survey Date(s):	11/01/04

Instrument Specifications

Instrument #	1	2
Meter Model:	Ludlum 2350-1	Ludlum 2350-1
Meter Serial #:	203457	192616
Detector Model:	Bicron G-5	Ludlum 44-17
Detector #:	B940T	199765
Detector Size (cm ²):	125	17.8
Calibration Due Date:	12/3/04	12/9/04
Count Time (min)	5	5
Contact Efficiency	6.05%	7.00%

Background (Gross)

Instrument #	1	2
Gamma (Ceilings)		329
Gamma (Floors)	5934	
Gamma (Walls)		699

Background (cpm)

instrument #	1	2
amma (Ceilings)		65.8
(Gamma (Floors)	1186.8	
Gamma (Walls)		139.8

Efficiencies (cpm/dpm)

Instrument #	1	2
Thin/No Paint	0.060	0.069
Ероху	0.049	0.056
Other	0.057	0.066

Ratio Used

	من المراجع الم	
Pu to Am - 241	8.1	

Comments

In cases where the critical level is greater than the calculated dpm/100cm2, the critical level will be used for statistical analysis.

Count Times for backgrounds and samples are equal.

Attenuation Factors: Based on observation of Walls and Ceilings. Epoxy on Floor determined by chip sampling.

Coatings	Thickness (inches)
Thin/No Paint	0.015
Ероху	0.250
Other	0.06

Total Activity Estimates Using Sodium Iodide Instruments

Survey Area: 2nd Floor Survey Unit: 776036 Survey Date(s): 11/01/04

				Critical Level (dpm/100cm2)	Total Alpha (dpm/100cm2)	
Sample Location #	RCT ID #	instrument #	Gross Counts	(dpina roodinz)	(apin/roddinz)	
1	1	2	718	8,100	8,100	
2	1	1	6,106	3,889	3,889	
3	1	1	7,038	3,889	23,956	
4	1	2	942	8,100	32,003	
5	1	1	6,808	3,889	18,965	
6	N/A	N/A	N/A	N/A	N/A	
7 .	1	2	896	8,100	25,945	
8	N/A	N/A	N/A	N/A	N/A	
9	1	2	863	8,100	21,599	
10	1	2	1,121	8,100	55,577	
11	1	2	1,055	8,100	46,885	
12	N/A	N/A	N/A	N/A	N/A	
13	N/A	N/A	N/A	N/A	N/A	
14	N/A	N/A	N/A	N/A	N/A	
15	N/A	N/A	N/A	N/A	N/A	
16	N/A	N/A	N/A	N/A	N/A	
17	N/A	N/A	N/A	N/A	N/A	
18	1	2	1,022	8,100	42,539	
19	1	2	1,050	8,100	46,227	
20	N/A	N/A	N/A	N/A	N/A	
21	N/A	N/A	N/A	N/A	N/A	
22	11	2	167	5,557	5,557	
23	1	2	381	5,557	6,848	
24	1	2	362	5,557	5,557	
25	N/A	N/A	N/A	N/A	N/A	
26	N/A	N/A	N/A	N/A	N/A	
27	N/A	N/A	N/A	N/A	N/A	
28	N/A	N/A	N/A	N/A	N/A	
29	1	2	424	5,557	12,511	
30	1	2	188	5,557	5,557	

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

Survey Area: Second Floor Building: 776

Survey Unit: 776036

Classification: NA

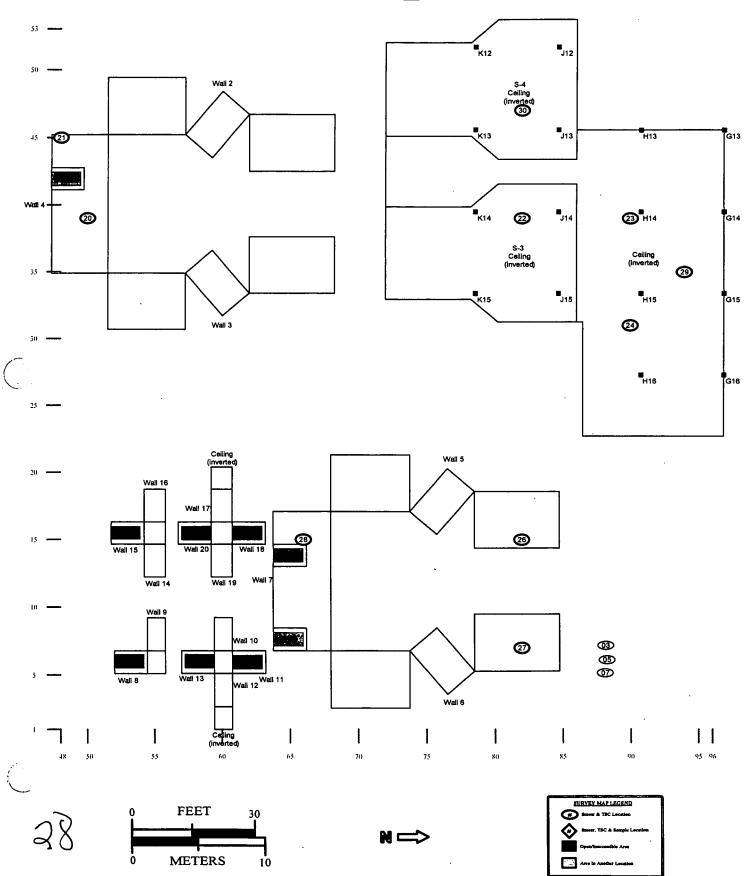
Survey Unit Description: Second floor

Total Floor Area: 534 sq. m

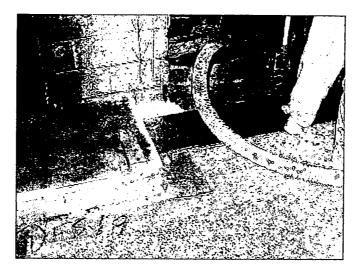
Total Area: 1921 sq. m

Grid Size: 8 x 8 sq.m

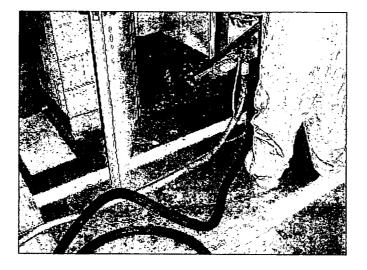
SURVEY UNIT 776036 - MAP 2 OF 2



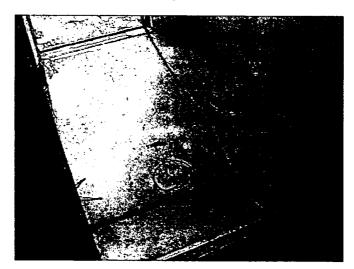
Picture 1.0 Hotspot in grid 60 being remediated

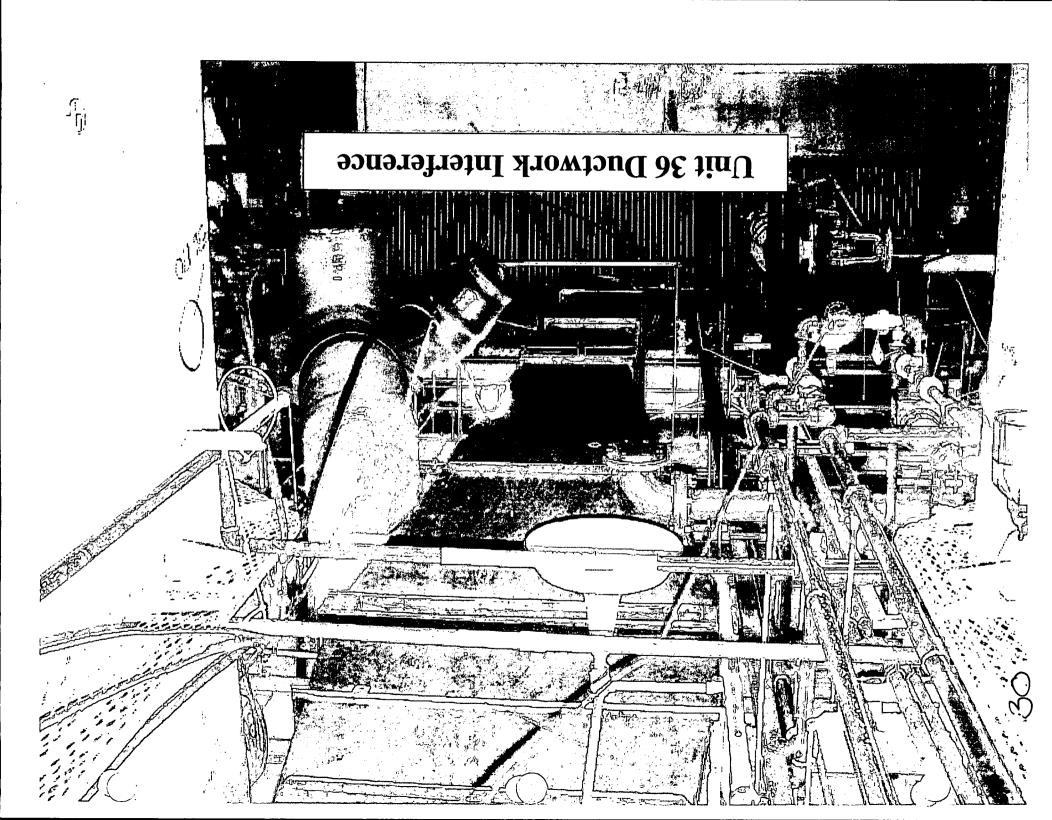


Picture 2.0 Decontamination of hot spot found in 36 A



Picture 3.0 Grid 34A prior to decontamination

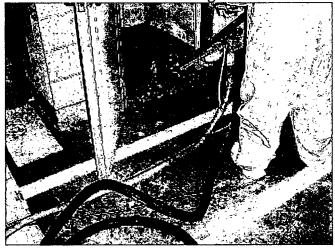


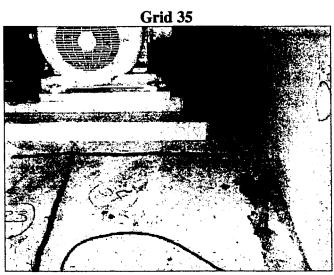


Decontamination of hotspot in grid 60

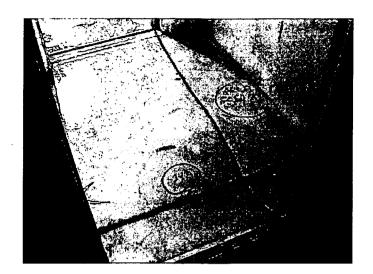


Decontamination in grid 36A





Grid 34A



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